

**Jennifer Fiegel, Ph.D.**

Division of Pharmaceutics (Joint Appointment)  
Department of Chemical and Biochemical Engineering (Joint Appointment)  
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**EDUCATION**

- May 2004 Ph.D. Chemical and Biomolecular Engineering, The Johns Hopkins University, Baltimore, MD. Dissertation: *Poly(ether-anhydride) Dry Particle Aerosols*. Advisor: Dr. Justin Hanes.
- May 1998 B.S. Chemical Engineering, University of Massachusetts at Amherst, Amherst, MA. Thesis: *Optimization of a Method to Measure Adsorption Isotherms at Low Pressures*. Advisor: Dr. W. Curtis Conner

**PROFESSIONAL EXPERIENCE**

**Academic Positions**

- 2006-present Assistant Professor  
Division of Pharmaceutics, College of Pharmacy, University of Iowa, Iowa City, IA.
- 2006-present Assistant Professor  
Department of Chemical and Biochemical Engineering, College of Engineering,  
University of Iowa, Iowa City, IA
- 2004-2006 Postdoctoral Fellow  
Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA.  
Mentor: Dr. David Edwards
- 1998-2003 NSF Graduate Student Fellow  
Chemical and Biomolecular Engineering Department, The Johns Hopkins University,  
Baltimore, MD

**Other Positions**

- 04/09-present Associate Faculty Member, Center for Gene Therapy of Cystic Fibrosis and Other Genetic Diseases, University of Iowa
- 2007-present Faculty Committee Member, The National Institute for Pharmaceutical Technology and Education
- 2007-present Faculty Member, Nanoscience and Nanotechnology Institute, University of Iowa
- 02/07-04/09 Affiliate Faculty Member, Center for Gene Therapy of Cystic Fibrosis and Other Genetic Diseases, University of Iowa

**HONORS AND AWARDS**

- 2007 PhRMA Foundation Research Starter Grant
- 2007 Old Gold Summer Fellowship, The University of Iowa
- 2003 Best Paper Award, Aerosole in der Inhalationstherapie VIII, Marburg, Germany.  
(English Translation: "Aerosols in Inhalation Therapy").
- 1999-2002 National Science Foundation Fellowship for Graduate Research
- 1997 Elected to Tau Beta Pi, Full Member

## SCHOLARSHIP

### **PUBLICATIONS**

1. J. Fiegel, L. Garcia-Contreras, M. Thomas, J. Verberkmoes, A. Hickey, D. Edwards. Preparation and *in vivo* evaluation of a dry powder for inhalation of capreomycin. *Pharm. Res.* 2008; 25(4): 805-811.
2. L. Garcia-Contreras, J. Fiegel, M.J. Telko, K. Elbert, A. Hawi, M. Thomas, J. VerBerkmoes, W.A. Germishuizen, P.B. Fourie, A.J. Hickey, D. Edwards. Inhaled large porous particles of capreomycin for the treatment of tuberculosis in a guinea pig model. *Antimicrob. Agents Chemother.* 2007; 51(8): 2830-2836.
3. W. Watanabe, M. Thomas, R. Clarke, A. Klibanov, R. Langer, G. Fuller, L. Griel, J. Fiegel, D. Edwards. Why inhaling salt water changes what we exhale. *J. Colloid Interface Sci.* 2007; 307(1): 71-78.
4. J. Fiegel, R. Clarke, D. Edwards. Airborne infectious disease and the suppression of exhaled aerosols [review]. *Drug Discovery Today.* 2006; 11(1-2):51-57.
5. D.A. Edwards, J. Fiegel, W. DeHaan, M. Brande, J. Man, R. Clarke. Novel inhalants for control and protection against airborne infections [review]. *Respiratory Drug Delivery* 2006; 1: 41-48.
6. J. Fiegel, F. Jin, J. Hanes, K. Stebe. Wetting of a particle in a thin film. *J. Colloid Interface Sci.* 2005; 291(2):507-514.
7. J. Fiegel, J. Fu, J. Hanes. Poly(ether-anhydride) microparticle aerosolization improved by controlling particle surface properties. *J. Control. Release.* 2004; 96(3):411-423.
8. J. Fu, J. Fiegel, J. Hanes. Synthesis and characterization of PEG-based ether-anhydride terpolymers: Novel polymers for pulmonary drug delivery. *Macromolecules*; 2004. 37(19): 7174-7180.
9. J. Fiegel, C. Ehrhardt, U.F. Schaefer, C.-M. Lehr, J. Hanes. Large porous particle impingement on lung epithelial cell monolayers: Toward improved particle characterization in the lung. *Pharm. Res.* 2003; 20(5):788-796.
10. J. Fu, J. Fiegel, E. Krauland, J. Hanes. New polymer carriers for pulmonary drug delivery. *Biomaterials* 2002; 23(22):4425-4433.
11. C. Ehrhardt, J. Fiegel, S. Fuchs, R. Abu-Dahab, U.F. Schaefer, J. Hanes, C.-M. Lehr. Drug absorption by the respiratory mucosa – Cell culture models and particulate drug carriers. *J. Aerosol Med.* 2002; 15(2):131-139.
12. C. Ehrhardt, C. Kneuer, J. Fiegel, J. Hanes, U.F. Schaefer, K.-J. Kim, C.-M. Lehr. Influence of apical fluid volume on the development of functional cellular junctions in the human bronchial epithelial cell line 16HBE14o-: implications for the use as an *in vitro* model for drug absorption. *Cell & Tissue Research* 2002; 308:391-400.

### **Book chapters:**

1. J. Hanes, M. Dawson, Y. Har-el, J. Suh, and J. Fiegel. Gene Therapy in the Lung. *In: A. J. Hickey* (ed.) *Pharmaceutical Inhalation Aerosol Technology*, 2nd edition. Vol. 134. New York: Marcel Dekker Inc. 2003.

### **PUBLISHED ABSTRACTS AND PROCEEDINGS**

1. E. Thomas, B. Stohs, J. Fiegel. Development of a dry powder aerosol for the dispersion and eradication of respiratory biofilms. *Proceedings of the American Institute of Chemical Engineers*, Philadelphia, PA, 2008.
2. R. Hamed, J. Fiegel. Bioaerosol Formation from Lung Surfaces: Evaluating the Role of Mucus Physicochemical Properties, *American Association of Pharmaceutical Scientists (AAPS) Annual Conference Proceedings*, Atlanta, GA, 2008.
3. S. Sommerfeld, B. Stohs, E. Thomas, J. Fiegel. Formulation and optimization of an antimicrobial aerosol for treatment of bacterial lung infections. *AAPS Annual Conference Proceedings*, Atlanta, GA, 2008.

4. R. Hamed, J. Fiegel. Physiologically-relevant cough machine to study bioaerosol formation in the lungs. *AAPS Annual Conference Proceedings*, San Diego, CA, 2007.
5. L. Garcia-Contreras, J. Fiegel, M.J. Telko, K. Elbert, A. Hawi, M. Thomas, J. VerBerkmoes, W.A. Germishuizen, P.B. Fourie, A.J. Hickey, D.A. Edwards. Pharmacokinetics of inhaled capreomycin particles in the guinea pig. *AAPS Annual Conference Proceedings*, San Diego, CA, 2007.
6. L. Garcia-Contreras, J. Fiegel, M.J. Telko, K. Elbert, A. Hawi, M. Thomas, J. VerBerkmoes, W.A. Germishuizen, P.B. Fourie, A.J. Hickey, D.A. Edwards. Efficacy of inhaled capreomycin for the treatment of tuberculosis in the guinea pig. *AAPS Annual Conference Proceedings*, San Diego, CA, 2007.
7. J. Fiegel, L. Garcia-Contreras, K. Elbert, A. Hickey, D. Edwards. Dry powder aerosols for multi-drug resistant tuberculosis (MDR-TB) treatment. *Proceedings of the American Institute of Chemical Engineers*, Cincinnati, OH, 2005.
8. J. Sung, L. Garcia-Contreras, Y. Liu, J. Fiegel, J. Verberkmoes, K. Elbert, A. Hawi, R. Prud'homme, A. Hickey, D. Edwards. Formulation and in vivo results for a porous nanoscale drug delivery platform for tuberculosis. *36<sup>th</sup> UNION World Conference on Lung Health*, Paris, France, 2005.
9. J. Fiegel, W. Watanabe, G. Fuller, D. Edwards. Controlling the production of exhaled bioaerosols. *Proceedings of the American Institute of Chemical Engineers*, Cincinnati, OH, 2005.
10. J. Fiegel, J. Sung, D.A. Edwards. Aggregate nanoparticle formulations for TB treatment. *35<sup>th</sup> UNION World Conference on Lung Health*, Paris, France, 2004.
11. J. Fiegel, J. Hanes, K. Stebe. Modeling insoluble aerosol particle submersion in lung fluids: Line tension effects. *Proceedings of the American Institute of Chemical Engineers*, Austin, TX, 2004.
12. J. Fiegel, J. Fu, J. Hanes. Controlled release poly(ether-anhydride) large porous particles for pulmonary delivery. *J. Aerosol Med* 2003; 16: 212.
13. J. Fiegel, K. Stebe, J. Hanes. Modeling insoluble aerosol particle submersion in lung fluids. *Proceedings of the American Institute of Chemical Engineers*, San Francisco, CA, 2003.
14. J. Fiegel, J. Hanes. Effect of surface properties on aerosolization of PEGylated poly(ether-anhydride) microspheres. *Proceedings of the International Symposium on Controlled Release of Bioactive Materials* 2003; 30: 719-720.
15. C. Ehrhardt, J. Fiegel, U.F. Schaefer, J. Hanes, C.M. Lehr. Calu-3 bronchial epithelial cell monolayers to study drug release and absorption from aerosol particles in vitro. *Proceedings of the 4<sup>th</sup> World Meeting ADRITELF/APGI/APV* (Italian, French and German Societies for Pharmaceutical Technology) 2002; 1009-1010.
16. J. Fiegel, J. Fu, J. Hanes. New poly(ether-anhydride) aerosols: Control of particulate physical and chemical properties for improved aerosolization and deposition behavior. *Proceedings of the American Institute of Chemical Engineers*, Indianapolis, IN, 2002.
17. J. Fu, J. Fiegel, J. Hanes. Synthesis and drug release from PEG-containing poly(ether-anhydride) aerosols: New materials for pulmonary drug delivery. *Proceedings of the American Institute of Chemical Engineers*, Indianapolis, IN, 2002.
18. J. Fu, J. Fiegel, J. Hanes. Large, light polyether-anhydride microspheres: A new carrier for pulmonary drug delivery. *Proceedings of the International Symposium on Controlled Release of Bioactive Materials* 2001; 28: 393-394.
19. J. Fiegel, C. Ehrhardt, C.M. Lehr, J. Hanes. An in vitro method to characterize therapeutic aerosol particulates using lung epithelial cell monolayers. *Proceedings of the American Institute of Chemical Engineers*, Reno, NV, 2001.
20. J. Hanes, J. Fiegel, J. Fu. New polymers for controlled pulmonary drug delivery. *Annals of Biomedical Engineering* 2001; 29: S-138.
21. J. Fiegel, C. Ehrhardt, C.M. Lehr, J. Hanes. Air-interfaced lung epithelial cell monolayers for characterization of large light polymer aerosols. *Annals of Biomedical Engineering* 2001; 29: S-141.

## **PATENTS**

1. J. Hanes, J. Fiegel, and J. Fu. Biodegradable polymer compositions: Compositions and uses related thereto, U.S. Patent No. 7,163,697 B2. Granted January 16, 2007.
2. J. Fiegel, J. Sung, D. Edwards. Particles for Treatment of Pulmonary Infection. (Claims accepted).

## **RESEARCH SUPPORT**

### ***Research Grants, awarded***

Biological Sciences Funding Program 01/09-12/09

Role: PI

Total Amount: \$30,000

“Development of Inhalable Nanoparticles for Targeted Delivery to the Lung Epithelium”

Center for Gene Therapy of Cystic Fibrosis and Other Genetic Diseases 04/09-03/11

Role: PI

Total Amount: \$100,000

“Development of LOS-Modified Nanoparticles for Improved Airway Epithelial Uptake”

Center for Health Effects of Environmental Contamination 01/09-12/09

Role: PI

Total Amount: \$30,000

“Effect of Nanoparticle Physicochemical Properties on Lung Surfactant Function”

PhRMA Foundation 01/08-12/09

Role: PI

Total Amount: \$60,000

“Development of dry powder aerosols to disperse and eradicate *Pseudomonas aeruginosa* infections in the lungs”

Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant 01/08-05/08

Support for an undergraduate research assistant

Total Amount: \$1,250

“Formulation and Optimization of Dry Powder Aerosols Containing a Bacterial Killing Enzyme”

Ulowa Old Gold Summer Fellowship 07/07-08/07

Role: PI

Total Amount: \$6,000

“Novel Aerosols for the Treatment of Opportunistic Respiratory Infections”

## **INVITED PRESENTATIONS**

1. Therapeutic Aerosols to Treat Respiratory Infections: From Biofilms to Mucosal Fluid Interactions, *University of Iowa, Department of Mechanical and Industrial Engineering*, Feb 26, 2009.
2. Exhaled Bioaerosol Formation: Toward New Strategies to Reduce Airborne Infectious Disease Transmission, *University of Iowa, Department of Chemistry – Physical and Environmental Chemistry Seminar Series*, May 5, 2008.
3. Particulate aerosols for the treatment of respiratory infections, *Particles 2008 Conference*, Orlando, FL, May 2008.
4. Advances in Aerosol Delivery, *IUPAC/OPCW Workshop: Impact of Scientific Developments on the Chemical Weapons Convention (International Union of Pure and Applied Chemistry/Organisation for the Prohibition of Chemical Weapons)*, Zagreb, Croatia, Apr 24, 2007.
5. Treating Tuberculosis via Inhaled Antibiotics, *University of Iowa, Department of Chemistry – Analytical Chemistry Seminar Series*, Apr 19, 2007.

6. Novel Aerosols for Treating Tuberculosis, *University of Iowa, College of Medicine: Pulmonary Conference*, Mar 26, 2007.
7. Engineering Novel Medical Aerosols: From the Bench to the Clinic, *University of Iowa, Department of Chemical and Biochemical Engineering*, Oct 12, 2006.
8. Biodegradable polymeric nanoparticles for drug delivery. *Applications for Nanoparticle Design and Microfabrication in Protein and Peptide Delivery Workshop: 3<sup>rd</sup> Annual Protein and Peptide Formulation Strategies*, Sponsored by the Institute for International Research, San Francisco, CA, Mar 2004.

### **PROFESSIONAL DEVELOPMENT - RESEARCH**

1. Women Faculty Career Development Workshop, Ulowa Office of the Provost, Feb 27, 2009.
2. Write Winning Grants: A Workshop on the Fundamentals of Good Grant Writing, Ulowa Center for Conferences, Feb 26, 2008.
3. Faculty Development Workshop, Ulowa College of Pharmacy, Facilitator: Prof. Barry Carter, Spring 2007.

### **COLLABORATIONS**

Prof. Michael McNeil, Department of Microbiology, Immunology and Pathology, Colorado State University

Prof. Julie Jessop, Department of Chemical & Biochemical Engineering, University of Iowa

Prof. Thomas Peters, Department of Occupational and Environmental Health, University of Iowa

Prof. Michael Apicella, Department of Microbiology, University of Iowa

## TEACHING

**COURSES**

<b>Semester</b>	<b>Course No.</b>	<b>Course Name (semester hours); Enrollment</b>
Spring 2009	52:195/46:200	Special Topics: Nanotechnology in Health Sciences (1 s.h.); Enrollment: 21
Spring 2009	52:090	Chemical and Biochemical Engineering Departmental Seminar (0 s.h.; seminar for freshman); Enrollment: 32
Fall 2008	59:005	Engineering Problem Solving I: Discussion/Lab Sections (3 s.h.); Enrollment: 55
Fall 2008	46:123	Pharmaceutics I: Solutions (15 hours; co-taught with Prof. Aliasger Salem); Enrollment: 113
Spring 2008	52:215	Intro to Lit Review & Proposal Writing (2 class periods; facilitated discussion of ethics case studies); Enrollment: 9
Spring 2008	52:090	Chemical and Biochemical Engineering Departmental Seminar (0 s.h.; seminar for freshman); Enrollment: 28
Fall 2007	59.005	Engineering Problem Solving I: Discussion/Lab Sections (3 s.h.); Enrollment: 63
Fall 2007	46:123	Pharmaceutics I: Solutions (15 hours; co-taught with Prof. Aliasger Salem); Enrollment: 114

**RESEARCH SUPERVISION – STUDENTS, FELLOWS, AND RESEARCH ASSISTANTS*****Graduate Students***

1. Stacy Sommerfeld (Jan. 2009-present), Ph.D. candidate in Chemical and Biochemical Engineering  
Research area: *Dry powder aerosols for treatment of opportunistic respiratory infections*  
Awards: Keith Guillory Pharmaceutics Fellowship (\$10,129 for 6 months)
2. Amir Mohammad (Aug. 2008 – present), Ph.D. candidate in Chemical and Biochemical Engineering  
Research area: *Behavior of particles at pulmonary fluid interfaces*
3. Mai Tu (Aug. 2008 – present), Ph.D. candidate in Pharmaceutics
4. Rania Hamed (Aug. 2006 – present), Ph.D. candidate in Pharmaceutics  
Research area: *Lung-derived bioaerosols: mechanism of formation and methods to suppress*  
Awards: John L. Lach Memorial Scholarship (\$1,400), Ulowa Division of Pharmaceutics/Guillory Fellowship AAPS 2008 Travel Award (\$500), AAPS 2007 PDD Section Travel Award (\$250), Ulowa Division of Pharmaceutics AAPS 2007 Travel Award (\$250), UI Executive Council of Graduate and Professional Student (ECGPS) Scholarly Presentation Award (\$150)
5. Emily Thomas (Aug. 2006 – Mar. 2009), M.S. candidate in Chemical and Biochemical Engineering  
Research area: *Dry powder aerosols for treatment of opportunistic respiratory infections*

***Undergraduate Research Assistants, University of Iowa***

6. Annie Kock (May 2009-present), B.S. candidate in Chemical and Biochemical Engineering
7. Laura Northup (Aug. 2008-present), B.S. candidate in Chemical and Biochemical Engineering  
Research topic: *Exhaled bioaerosols*  
Awards: Chemical Engineering Departmental Research Grant (\$500)
8. Nikhil Anand (Feb. 2008-Jan. 2009), B.S. candidate in Biomedical Engineering  
Research topic: *Formulation and optimization of corticosteroid-loaded polymeric aerosols for the treatment of asthma*
9. Stacy Sommerfeld (Sept. 2007-Dec. 2008), B.S. candidate in Chemical and Biochemical Engineering  
Research topic: *Formulation and optimization of aerosols containing a bacterial-killing enzyme*

Awards: Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant (\$1250), Executive Council of Graduate and Professional Students (ECGPS) Research Grant (\$500), Excellence in Undergraduate Research Awards (EURA) (\$1000), Engineering Excellence in Undergraduate Research Award (\$500), Chemical Engineering Departmental Research Grant (\$500)

10. Cassie Archer (Sept. – Dec. 2007), B.S. candidate in Chemical and Biochemical Engineering  
Research topic: *Formulation and optimization of aerosols containing a bacterial-killing enzyme*

#### **Undergraduate Research Assistants, Other Domestic Universities**

11. Nearco Rodriguez (Jun. 2008-Aug. 2008), B.S. candidate in Biology, Medgar Evers College  
AGEP Summer Research Program  
Research topic: *Statistical design of aerosols to co-deliver antibiotics and bacterial dispersion compounds*  
Awards: Annual Biomedical Research Conference for Minority Students – 2008 Travel Award Winner, UMBC Research Conference - 1<sup>st</sup> place winner, 41<sup>st</sup> Annual Metropolitan Association of College and University Biologists Research Conference - 1<sup>st</sup> place winner
12. Alexander Benson (Jun. 2008-Aug. 2008), B.S. candidate in Chemical Engineering, Carnegie Mellon University  
Research topic: *Oxidation of glycoproteins for enhanced crosslinking*

#### **Undergraduate Research Assistants, Foreign Exchange**

13. Leticia Fernandez (Aug. 2008-May 2009), B.S. candidate in Chemical Engineering, Universidad de Santiago de Compostela (USC), Spain  
Research topic: *Design of nanoparticulate aerosols*  
Awards: College of Engineering Senior Research Poster Award, Excellence in Undergraduate Research CBE 2<sup>nd</sup> Place Poster Award (\$120), Nanoscience and Nanotechnology Institute Honorable Mention Poster Award

#### **Postdoctoral Fellows**

14. Timothy Brenza (Aug. 2008-present)  
Research topic: *Responsible design of inhalable nanomaterials*  
Awards: PhRMA Foundation Postdoctoral Fellowship (\$40,000 per year for 1.5 years)

#### **Research Assistants**

15. Buffy Ann Stohs (Jan. 2007-Jun. 2008), Research Assistant I

#### **PH.D. COMMITTEE MEMBERSHIP**

##### **Member on Ph.D. Candidate Comprehensive Examinations**

Yogita Krishnamachari (Pharmaceutics; Supervising Professor: Aliasger Salem), 6/2009  
Chih-Wei Lin (Pharmaceutics; Supervising Professor: Peter Veng-Pedersen), 3/27/2009  
Jiang Qiu (Pharmaceutics; Supervising Professor: Lee Kirsch), 6/16/2008  
Jessica Melanko (CBE; Supervising Professor: Aliasger Salem), 12/17/2007  
Alicia Pettibone (CBE; Supervising Professor: Charles Stanier), 5/8/2007  
Janjira Intra (Pharmaceutics; Supervising Professor: Aliasger Salem), 12/6/2006

##### **Member on Ph.D. Defense Committee**

Hefei Zhang (Pharmaceutics; Supervising Professor: Maureen Donovan), 12/15/2008  
Janjira Intra (Pharmaceutics; Supervising Professor: Aliasger Salem), 12/2/2008  
Chen-Ming Lee (Pharmaceutics; Supervising Professor: Maureen Donovan), 5/16/2008  
Mow Yee Foo (Pharmaceutics; Supervising Professor: Maureen Donovan), 7/16/2007

**PROFESSIONAL DEVELOPMENT - TEACHING**

1. Cross-Cultural Insights into Supervising and Being Supervised, Office of International Students and Scholars, Feb 18, 2009.
2. Large Class Summit, Office of the Provost and Center for Teaching, Feb 6, 2009.
3. Building a Global Community – Introductory Workshop, Office of International Students and Scholars, Feb 3, 2009.
4. Diversity and Inclusive Teaching and Learning, Ulowa Center for Teaching, Jan 27, 2009.
5. Millennial Learners, Ulowa Center for Teaching, Jan 30, 2008.
6. Iowa Undergraduates: Who They Are and Why it Matters, Ulowa Center for Teaching, Jan 24, 2008.
7. ASEE Chemical Engineering Summer School for Faculty, Washington State University, Jul 28 – Aug 2, 2007.
8. How to Click with your Students: Student Response Systems in Support of Good Practice, Ulowa Center for Teaching, Feb 28, 2007.
9. Creating a Professional Portfolio: Putting Your Best Face Forward, Ulowa Center for Teaching, Feb 6, 2007.

## SERVICE

### SERVICE WITHIN THE DEPARTMENTS AND UNIVERSITY

#### **College of Pharmacy Committees**

2008 – 2009 Accreditation Committee – Student Standards  
2008 – 2009 College Laboratory Safety Committee  
2007 – 2008 Information Technology Committee

#### **Department of Chemical and Biochemical Engineering**

2008-present Undergraduate student advising  
2008-present Coordinate Chemical and Biochemical Engineering Departmental Seminar  
(seminar for declared chemical engineering freshman held each spring)

#### **University Service**

Faculty judge for paper submissions and oral presentations, James F. Jakobsen Graduate Conference; Mathematical, Physical & Engineering Sciences Division, 2008 and 2009.

#### **Other**

Member, working group developing a Pharmaceutical Engineering and Science degree program between the Colleges of Engineering and Pharmacy

### SERVICE - COMMUNITY, STATE, NATIONAL

Co-presenter (with Prof. Julie Jessop) of “It’s not a stretch – you can be an engineer too!”, Open Minds, Open Doors Conference for Middle School Girls, Cedar Rapids: 36 students, Oct. 14, 2008.

Solon High School Career Day Presenter for Chemical Engineering: ~30 students in 9<sup>th</sup>-10<sup>th</sup> grade, Apr 18, 2007; 25 students, Apr 23, 2008.

Grant Wood EAE Physics Olympics Judge, Kirkwood Community College, Cedar Rapids, Apr 2, 2007.

### SERVICE WITHIN THE RESEARCH COMMUNITY

#### **Articles reviewed for the following journals:**

International Journal of Pharmaceutics  
Journal of Controlled Release  
Biomacromolecules  
Pharmaceutical Research  
Langmuir  
Expert Opinion on Drug Metabolism and Toxicology  
Critical Care  
Nanomedicine: Nanotechnology, Biology and Medicine

#### **Grant proposals reviewed for the following agencies:**

National Institutes of Health, National Institute of Allergy and Infectious Diseases (NIAID)  
Work Safe British Columbia

#### **Other expert reviews of proposals (books and colloquia) for the following:**

John Wiley & Sons (pharmaceutical book)  
Indo-US Science & Technology Forum (colloquia)

#### **Sessions Organized and/or Chaired**

1. Bionanotechnology for Gene and Drug Delivery III, American Institute of Chemical Engineers Annual Meeting, Philadelphia, PA, Nov. 2008 (with Prof. Sandro da Rocha).

2. Nanotechnology for Biotechnology and Pharmaceuticals I and II, American Institute of Chemical Engineers Annual Meeting, Philadelphia, PA, Nov. 2008 (with Prof. Thomas Dziubla).
3. Nanotechnology for Biotechnology and Pharmaceuticals Industries, American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, Nov. 2007 (with Prof. Corey Berkland).
4. Advances in Biomaterials, 20<sup>th</sup> Annual American Chemical Society Rocky Mountain Regional Meeting, Denver, CO, Sept. 2007 (Co-chair with Prof. Matt Kipper).

**PROFESSIONAL SOCIETY MEMBERSHIPS**

American Society for Engineering Education  
International Society for Aerosols in Medicine  
American Institute of Chemical Engineers  
Society for Biological Engineering  
American Association of Pharmaceutical Scientists  
Controlled Release Society  
Society of Women Engineers  
Tau Beta Pi (Engineering Honors Society)